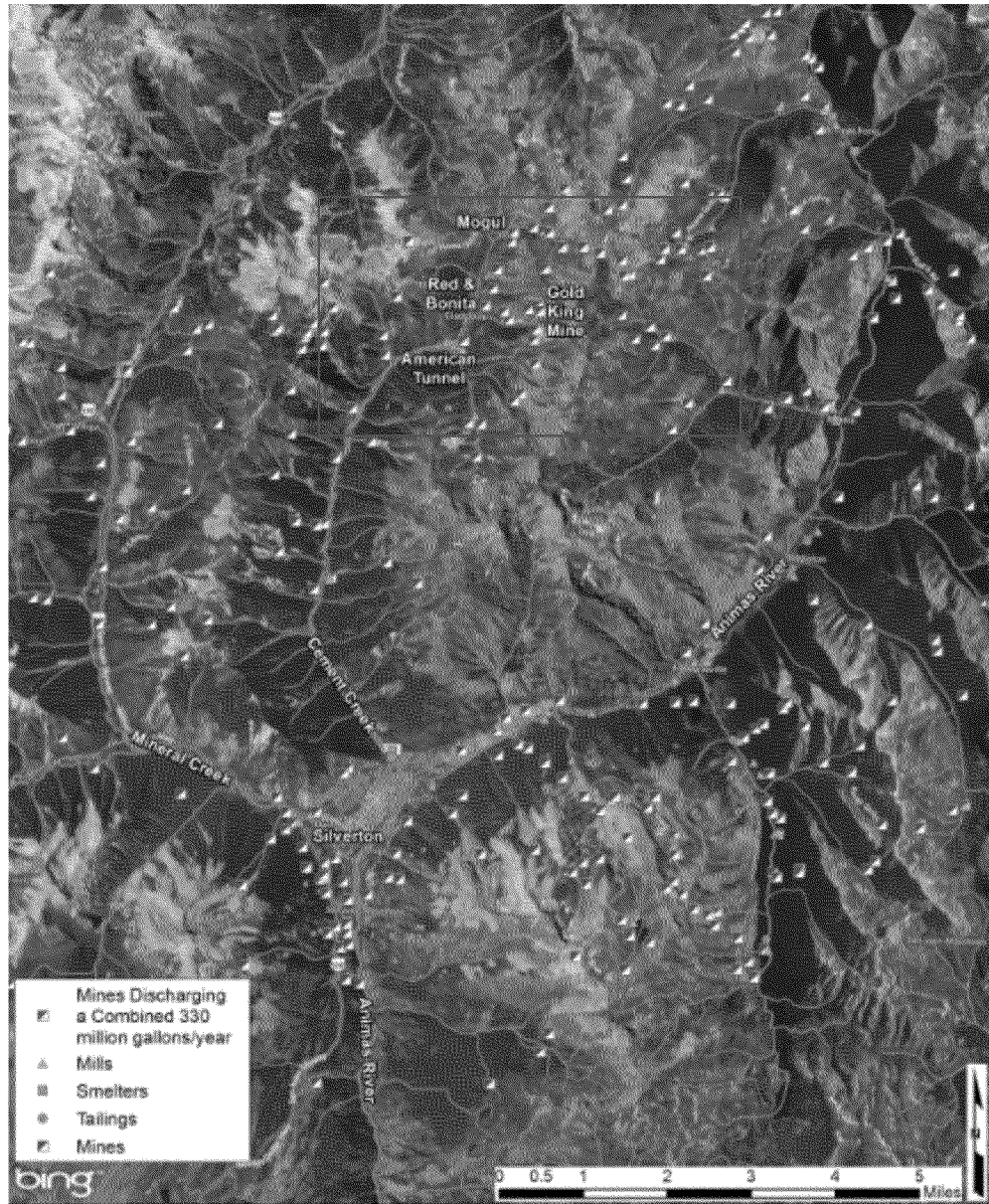


Source Control Measures

Upper Animas River Basin



■ Mines Discharging
a Combined 330
million gallons/year

Work Completed in Upper Animas

- Since 1990, over 50 reclamation projects have been completed in the Upper Animas River Basin, including:
 - moving or capping contaminated tailings and waste rock, installing passive treatment and ponds, water diversions, and mine adit hydraulic controls including bulkheads to halt or allow the management of flow from discharging mines.
- Projects have been completed in each of the three major tributaries above Silverton: the Upper Animas, Cement Creek, and Mineral Creek drainages.
- Projects have been completed by private mining companies (Sunnyside Gold Corp., Gold King Mining and others), Federal agencies (Bureau of Land Management and United States Forest Service), State of Colorado agencies (Division of Mining Geology/Division of Reclamation Mining and Safety), and by stakeholder groups (Animas River Stakeholder Group and others) through CWA Section 319 Funds.

Gold King Mine Site Operations

- Stabilizing mine access to establish control of water flow over the winter.
- Piping water discharge approx. 4600 feet from mine to treatment ponds at Gladstone.
- Further entry and stabilization will occur next season.

Gold King Mine Adit: Shotcrete Stabilizing Opening



Treatment Pond at Gladstone



Water Treatment

- Temporary treatment plant being installed to treat GKM discharge over winter and during mine site operations; treating ~550 gpm from GKM
- Water treatment performance:
 - Neutral pH effluent > 6.0, < 9.0
 - Dissolved solids will be reduced by removal of metals and formation of metal hydroxide sludge.
 - Total solids will be reduced by coagulation, flocculation, and settling through the clarifier.
 - Color is currently caused primarily by iron oxidation, and staining is caused both by iron and manganese in the mine water forming precipitates on rocks and in sediments. The treatment process will remove both iron and manganese by more than 90%, reducing the potential for color.
 - For metals of concern, the treatment process typically removes metals between 95% and 99%.

Groups Working on Animas Issues

The Animas River Stakeholders Group (ARSG) mission is to:

- Improve water quality impacts resulting from historic mining
- Consensus building
- Usually meets on the 4th Tuesday of the month in Silverton or Durango
- More information: <http://www.animasriverstakeholdersgroup.org/>

Other Groups Active in addressing water quality issues in the Animas River:

- Animas Watershed Partnership <http://animaswatershedpartnership.org/>
- San Juan Citizen's Alliance <http://sanjuancitizens.org/>

State of Colorado, La Plata County and San Juan County officials are also active in understanding concerns and options for addressing impacts to the Animas River.